

***FlyBy Math™* Alignment**
Academic Standards for Mathematics

2.3 Measurement and Estimation

2.3.11 Grade 11 Standard

A. Select and use appropriate units and tools to measure to the degree of accuracy required in particular measurement situations.

***FlyBy Math™* Activities**

--Calculate and measure the position and time of simulated aircraft. Represent that motion using tables, graphs, equations, and experimentation.

2.4 Mathematical Reasoning and Connections

2.4.11 Grade 11 Standard

E. Demonstrate mathematical solutions to problems (e.g., in the physical sciences).

***FlyBy Math™* Activities**

--Apply mathematics to predict and analyze aircraft conflicts and validate through experimentation.

2.5 Mathematical Problem Solving and Communication

2.5.11 Grade 11 Standard

B. Use symbols, mathematical terminology, standard notation, mathematical rules, graphing and other types of mathematical representations to communicate observations, predictions, concepts, procedures, generalizations, ideas and results.

***FlyBy Math™* Activities**

--Represent distance, speed, and time relationship for constant speed cases using tables, bar graphs, line graphs, equations, and a Cartesian coordinate system.

--Predict outcomes and explain results of mathematical models and experiments.

C. Present mathematical procedures and results clearly, systematically, succinctly and correctly.

--Explain and justify solutions regarding the motion of two airplanes using the results of plotting points on a schematic of a jet route, on a vertical line graph, and on a Cartesian coordinate system.

D. Conclude a solution process with a summary of results and evaluate the degree to which the results obtained represent an acceptable response to the initial problem and why the reasoning is valid.

--Predict outcomes and explain results of mathematical models and experiments.

--Explain and justify solutions regarding the motion of two airplanes using the results of plotting points on a schematic of a jet route, on a vertical line graph, and on a Cartesian coordinate system.

2.8 Algebra and Functions

2.8.11 Grade 11 Standard

A. Analyze a given set of data for the existence of a pattern and represent the pattern algebraically and graphically.

***FlyBy Math™* Activities**

--Represent distance, speed, and time relationship for constant speed cases using tables, bar graphs, line graphs, equations, and a Cartesian coordinate system

B. Give examples of patterns that occur in data from other disciplines.	--Use tables, bar graphs, line graphs, a Cartesian coordinate system, and equations to model aircraft conflicts and predict outcomes.
D. Formulate expressions, equations, inequalities, systems of equations, systems of inequalities and matrices to model routine and non-routine problem situations.	--Use tables, bar graphs, line graphs, a Cartesian coordinate system, and equations to model aircraft conflicts and predict outcomes.
G. Analyze and explain systems of equations, systems of inequalities and matrices.	--Explain and justify solutions regarding the motion of two airplanes using the results of plotting points on a schematic of a jet route, on a vertical line graph, and on a Cartesian coordinate system.
Q. Represent functional relationships in tables, charts and graphs.	--Represent distance, speed, and time relationship for constant speed cases using tables, bar graphs, line graphs, equations, and a Cartesian coordinate system
R. Create and interpret functional models.	--Use tables, bar graphs, line graphs, a Cartesian coordinate system, and equations to model aircraft conflicts and predict outcomes.